

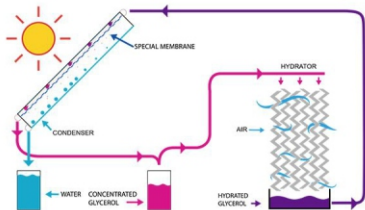
Breakthrough in water from air technology

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The new Sanakvo technology is based on the absorption of water vapor into glycerol and its recovery in a sandwich-like membrane structure.

Using the principle of membrane distillation (heated by solar or electric heat), it provides a condensate of **pure drinking water**.¹
It allows water generation **everywhere and forever**.²

Its proof of concept in an arid setting was established on the desert island Sai in Cape Verde (2018)



Video Explanation



Water vapor absorption.

Concentrated glycerol is pumped on the top of an absorption structure (Hydrator). This structure is formed by pleated textile (for ex. cotton). The textile bands are fixed on a simple holder, for example, a pleated garden fence wire. This is inexpensive, broadly available, and easily bent. The structure is opened so that air can easily circulate through it. Water vapor has good contact with downwards-flowing glycerol.

Generation of pure water.

Water containing glycerol is pumped into a thin sandwich structure formed by a thin sheet of Al foil and a selective membrane, allowing only vapor to pass through - but no liquid.

Water vapor condenses to pure water on the surface of the condenser. The water obtained is very pure without the use of filters.



- This technology is the lowest-cost water-from-air technology (parts and materials for a home unit are <\$100 and even lower for solar modules.)
- Easy fabrication steps using well-established processes and common materials.
 - Productivity is in a range of 10 to 30 l/day in electric home systems and 5 l/day/m² water per day in solar systems, both depending on air humidity.

The Sanakvo foundation will work toward facilitating spreading the technology on a global scale
Partnerships are needed for the implementation of this technology all around the world.

